

Application Number 10/045,553
Amendment in response to Office Action mailed May 18, 2004

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Currently Amended): An implantable neurological stimulation lead with improved stylet handle, comprising:

a lead body having a body proximal end, a body distal end, and a stylet lumen;
at least one conductor contained in the lead extending from the body proximal end to the body distal end, the conductor being electrically insulated;
at least one electrical connector carried on the body proximal end and electrically connected to the conductor;
at least one electrode carried on the body distal end and electrically connected to the conductor;
a stylet wire configured for insertion into the stylet lumen to stiffen the lead body; and,
a stylet handle connected to the stylet wire, wherein the stylet handle defines a lead carrier with a channel-like recess to receive the lead body when the lead body is pushed laterally into the channel-like recess, and includes one or more members that protrude into the channel-like recess to hold to grip the stylet having a lead carrier and at least one gripper carried in the lead carrier configured to grip the lead body at any selected point along the lead body between the body distal end and the body proximal end.

Claim 2 (Original): The implantable neurological stimulation lead as in claim 1, wherein the selected point is any point along the lead body other than the lead body distal end.

Claim 3 (Currently Amended): The implantable neurological stimulation lead as in claim 1, further comprising a stylet stop in the lead distal end for the stylet wire to contact before the lead body is held gripped in the lead carrier.

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Claim 4 (Original): The implantable neurological stimulation lead as in claim 1, further comprising a stylet release in the stylet handle, the stylet release having an engaged position where the stylet wire is coupled to the stylet handle and a disengaged position where the stylet wire is decoupled from the stylet handle creating a lead opening to permit the stylet handle to be moved toward the lead distal end without being encumbered by the stylet wire.

Claim 5 (Currently Amended): An implantable neurological stimulation lead with improved stylet handle, comprising:

a lead body having a body proximal end, a body distal end, and a stylet lumen;
at least one conductor contained in the lead extending from the body proximal end to the body distal end, the conductor being electrically insulated;
at least one electrical connector carried on the body proximal end and electrically connected to the conductor;
at least one electrode carried on the body distal end and electrically connected to the conductor;
a stylet wire configured for insertion into the stylet lumen to stiffen the lead body; and;
~~stylet handle means for holding grasping the lead body selectively connected to the stylet wire, the means for grasping configured to grip the lead body at any selected point along the lead body between the body distal end and the body proximal end, wherein the stylet handle means defines a lead carrier with a channel-like recess to receive the lead body when the lead body is pushed laterally into the channel-like recess, and includes one or more members that protrude into the channel-like recess to hold the lead body.~~

Claim 6 (Currently Amended): A stylet for an implantable neurological stimulation lead, comprising:

a stylet wire configured for insertion into a stylet lumen to stiffen a lead body; and;
~~a stylet handle connected to the stylet wire, wherein the stylet handle defines a lead carrier with a channel-like recess to receive the lead body when the lead body is pushed laterally into the channel-like recess, and includes one or more members that protrude into the channel-like recess to hold the lead carrier and at least one gripper carried in the lead carrier~~

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configured to grip the lead body at any selected point along the lead body between a distal end of the lead body and a proximal end of the lead body.

Claim 7 (Original): The stylet as in claim 6, wherein the selected point is any point along the lead body other than the lead body proximal end.

Claim 8 (Original): The stylet as in claim 6, further comprising a stylet release in the stylet handle, the stylet release having an engaged position where the stylet wire is coupled to the stylet handle and a disengaged position where the stylet wire is decoupled from the stylet handle creating a lead opening to permit the stylet handle to be moved toward the lead distal end without being encumbered by the stylet wire.

Claim 9 (Currently Amended): A stylet for an implantable neurological stimulation lead, comprising:

a stylet wire configured for insertion into a stylet lumen to stiffen a lead body; and,
a means for holding grasping the lead body selectively connected to the stylet wire, the means for holding grasping defining a channel-like recess to receive the lead body when the lead body is pushed laterally into the channel-like recess, and including one or more members that protrude into the channel-like recess to hold configured to grip the lead body at any selected point along the lead body between a distal end of the lead body and a proximal end of the lead body.

Claim 10 (Currently Amended): A method for inserting a stylet in a neurological stimulation lead, comprising:

aligning a stylet wire with a stylet lumen of a lead body proximal end;
inserting the stylet wire into the stylet lumen;
stopping insertion of the stylet wire when the stylet wire contacts a stylet stop in the stylet lumen of a lead body distal end;
inserting the lead body in a stylet handle lead carrier; and,

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holding gripping the lead body at any selected point along the lead body between a lead body distal end and the lead body proximal end within a channel-like recess with at least one gripper located in the stylet handle lead carrier when the lead body is pushed laterally into the channel-like recess, while the stylet wire remains in contact with the stylet stop in the stylet lumen in the lead body distal end, wherein the stylet handle lead carrier further includes one or more members that protrude into the channel-like recess to hold the lead body.

Claim 11 (Currently Amended): The method as in claim 10 wherein the gripping the lead body is held performed on the lead body proximal end.

Claims 12-16 (Canceled).

17. (Currently Amended): A device for implanting a neurostimulation lead, the device comprising:

a stylet wire for insertion into a stylet lumen in a neurostimulation lead; and
a stylet handle connected to the stylet wire, the stylet handle having a lead carrier and at least one gripper carried in the lead carrier configured to grip to hold the lead at a selected point along the lead, wherein the lead carrier defines a channel-like recess to receive the lead when the lead is pushed laterally into the channel-like recess, and the gripper includes one or more members indentations that extend into the channel-like recess.

Claim 18 (Currently Amended): The device of claim 17, wherein the members indentations narrow a width of a portion of the channel.

Claims 19-20 (Canceled).

Claim 21 (Previously Presented): The device of claim 17, wherein the stylet handle includes a lead opening to accommodate the lead and permit the stylet handle to be moved toward a distal end of the lead.